

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT: Stephen R. Lawrence and Omar H. Khan  
SERIAL NO.: 10/815,071  
FILING DATE: March 31, 2004  
TITLE: METHODS AND SYSTEMS FOR STRUCTURING EVENT DATA IN A  
DATABASE FOR LOCATION AND RETRIEVAL  
EXAMINER: Nguyen, Merilyn  
GROUP ART UNIT: 2163  
ATTORNEY DOCKET NO. 24207-10075

**CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION**

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with 37 C.F.R. § 1.8(a)(i)(C) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: November 26, 2007

By: /Christopher King/

Christopher P. King, Reg. No. 60,985

COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

**APPEAL BRIEF**

Pursuant to the requirements of 37 C.F.R. § 41.37, please consider this document as the Appellant's Brief in the present application currently before the Board of Patent Appeals and Interferences (hereinafter "the Board").

## TABLE OF CONTENTS

I. REAL PARTY IN INTEREST .....	4
II. RELATED APPEALS AND INTERFERENCES.....	4
III. STATUS OF CLAIMS .....	4
IV. STATUS OF AMENDMENTS.....	5
V. SUMMARY OF CLAIMED SUBJECT MATTER .....	5
1. Independent Claim 1 .....	6
2. Independent Claim 28 .....	7
3. Independent Claim 55 .....	8
VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL .....	9
VII. ARGUMENT .....	9
A. Vleet Fails to Disclose Each and Every Limitation of Claims 1, 3-8, 11, 13, 14, 16-22, 28, 30-35, 38, 40-41, 43-49 .....	9
B. Claims 9-10, 15, 36-37, and 42 are Patentable over Vleet and Belfiore.....	11
C. Claims 23-25 and 50-52 are Patentable Vleet and Hrabik.....	13
D. Claims 26-27 and 53-54 are Patentable over Vleet, Hrabik, and Maxham.....	13
E. Conclusion .....	14
VIII. CLAIMS APPENDIX .....	15
IX. EVIDENCE APPENDIX .....	26
X. RELATED PROCEEDINGS APPENDIX .....	27

## TABLE OF AUTHORITIES

### CASES

<i>In re Glass</i> , 472 F.2d 1388 (C.C.P.A. 1973) .....	12
<i>In re Royka</i> , 490 F.2d 981 (C.C.P.A. 1974).....	11
<i>Verdegaal Bros. v. Union Oil Co. of California</i> , 814 F.2d 628, 631 (Fed. Cir. 1987) .....	9

### STATUTES

35 U.S.C. § 102.....	9
35 U.S.C. § 103(a) .....	12

### RULES

MPEP § 2131 .....	9
MPEP § 2143.03 .....	12
MPEP § 706.02(j) .....	12

**I. REAL PARTY IN INTEREST**

The real party in interest in the present application is Google Inc., assignee of all rights and interests in the present application. Assignment to Google Inc. from the inventors, Stephen R. Lawrence and Omar Habib Khan, was recorded in the United States Patent and Trademark Office on November 26, 2004, at Reel 016018, Frame 0906.

**II. RELATED APPEALS AND INTERFERENCES**

To the best knowledge of the Appellant and the Appellant's legal representative, there are no other appeals or interferences that will directly affect, be affected by, or have a bearing on the decision of the Board in the present appeal.

**III. STATUS OF CLAIMS**

Claims 1, 3-11, 13-28, 30-38, and 40-55 are currently pending in the present application. These claims were rejected in the final Office Action of June 4, 2007. *See* final Office Action of June 4, 2007, page 1. Specifically, claims 1, 3-8, 11, 13, 14, 16-22, 28, 30-35, 38, 40-41, 43-49 and 55 were rejected under 35 USC § 102(e) as being anticipated by Vleet, U.S. Application Number 2005/0033803 (hereinafter "Vleet"). Claims 9-10, 15, 36-37, and 42 were rejected under 35 USC § 103(a) as being unpatentable over Vleet in view of Belfiore, U.S. Patent Application 2002/0059425 (hereinafter "Belfiore"). Claims 23-25 and 50-52 were rejected under 35 USC § 103(a) as being unpatentable over Vleet in view of Hrabik, U.S. Patent Application 2002/0178383 (hereinafter "Hrabik"). Finally, claims 26-27 and 53-54 were rejected under 35 USC § 103(a) as being unpatentable over Vleet in view of Hrabik and Maxham, U.S. Patent Application 2004/0187075 (hereinafter "Maxham"). Claims 2, 12, 29, and 39 are canceled.

The rejections of claims 1, 3-11, 13-28, 30-38, and 40-55 are hereby appealed.<sup>1</sup>

#### **IV. STATUS OF AMENDMENTS**

All claim amendments submitted to the Examiner during prosecution of the present application have been entered. An amendment to claim 28 to address a rejection under 35 U.S.C. 112, ¶ 1, was submitted subsequent to the issuance of the final Office Action of June 4, 2007. This amendment was entered for purposes of appeal as stated in the supplementary Advisory Action issued on August 28, 2007. The claims involved in the present appeal are presented in Section VIII.

#### **V. SUMMARY OF CLAIMED SUBJECT MATTER**

In general, embodiments of the claimed invention capture an event associated with an article and associate the event with related events. This involves capturing and indexing the event, creating a related event object that is associated with a set of one or more related events, creating a *second level* related event object comprising the related event object and a set of one or more other related event objects, and associating the second level related event object, the related event object, and the one or more other related events objects. Thus, the claimed second level event objects associate related events objects, which in turn associate events.

---

<sup>1</sup> Additionally, claims 1, 28, and 55 were objected to. However, as noted by MPEP § 701.01, objections may only be reviewed by way of petition, and not by appeal to the Board. Thus, the objections are not discussed in this Brief.

Further, claim 28 was rejected under 35 U.S.C. § 112, ¶ 1. Examiner Le stated in a telephone call on November 26, 2007, that the amendment after final rejection submitted on July 23, 2007 addressed and overcame this rejection. Therefore, Applicants have omitted further discussion of the § 112 rejection.

For example, if the article is a web site, an event related to the web site could be viewing of a web page on the web site. (Specification paragraph 0019). A related event object could then be associated with other events for the same web page. Further, a second level event object could comprise the related event object and related event objects for other pages on the web site.

# 1. Independent Claim 1

Independent claim 1 is directed to a method comprising:

- (i) capturing an event associated with an article, wherein the event comprises event data  
(*See* Specification, page 22, line 14 to page 23, line 2);
- (ii) indexing the event, the indexing comprising extracting at least some of the event data  
(*See* Specification, page 25, line 9 to page 30, line 8);
- (iii) creating a related event object related to the event and based on at least a portion of the extracted event data, wherein the related event object is associated with a set of one or more related events (*See* Specification, page 15, line 18 to page 16, line 7; page 19, line 8 to page 25, line 2; *See* Figures 2 and 3) ;
- (iv) creating a second level related event object comprising the related event object and a set of one or more other related event objects (*See* Specification, page 20, lines 1-9);
- (v) associating the second level related event object, the related event object, and the one or more other related events objects (*See* Specification, page 20, lines 1-9; page 23, line 17 to page 24, line 8); and

- (vi) storing at least a portion of the extracted event data, the related event object, and the second level related event object (*See Specification*, page 31, line 10 to page 32, line 2).

## 2. Independent Claim 28

Independent claim 20 is directed to a computer-readable storage medium containing program code, comprising:

- (i) program code for capturing an event associated with an article, wherein the event comprises event data (*See Specification*, page 22, line 14 to page 23, line 2);
- (ii) program code for indexing the event, the indexing comprising extracting at least some of the event data (*See Specification*, page 25, line 9 to page 30, line 8);
- (iii) program code for creating a related event object related to the event and based on at least a portion of the extracted event data, wherein the related event object is associated with a set of one or more related events (*See Specification*, page 15, line 18 to page 16, line 7; page 19, line 8 to page 25, line 2; *See Figures 2 and 3*);
- (iv) program code for creating a second level related event object comprising the related event object and a set of one or more other related event objects (*See Specification*, page 20, lines 1-9);
- (v) program code for associating the second level related event object, the related event object, and the one or more other related events objects (*See Specification*, page 20, lines 1-9; page 23, line 17 to page 24, line 8); and

- (vi) program code for storing at least a portion of the extracted event data, the related event object, and the second level related event object (*See Specification*, page 31, line 10 to page 32, line 2).

### 3. Independent Claim 55

Independent claim 55 is directed to a method comprising:

- (i) capturing an event associated with an article, wherein the event comprises event data (*See Specification*, page 22, line 14 to page 23, line 2);
- (ii) indexing the event, the indexing comprising extracting at least some of the event data (*See Specification*, page 25, line 9 to page 30, line 8);
- (iii) creating a related event object related to the event and based on at least a portion of the extracted event data, wherein the related event object comprises a set of one or more related events (*See Specification*, page 15, line 18 to page 16, line 7; page 19, line 8 to page 25, line 2; *See Figures 2 and 3*);
- (iv) providing a pointer between the related event object and the one or more related events (*See Specification*, paragraphs page 21, line 1 to page 22, line 8; *See Figures 2 and 3*, reference numerals 214, 216, 218, 220, 314, 316, 318, and 320);
- (v) creating a second level related events object comprising the related event object and a set of one or more other related event objects (*See Specification*, page 20, lines 1-9);
- (vi) providing a pointer between the second level related event object and the one or more other related events objects (*See Specification*, page 23, line 17 to page 24, line 8); and



(vii) storing the related event object, at least a portion of the extracted event data, and the second level related events object (*See* Specification, page 31, line 10 to page 32, line 2).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The grounds of rejection presented for review in the present appeal are as follows:

1. Whether Vleet anticipates claims 1, 3-8, 11, 13, 14, 16-22, 28, 30-35, 38, 40-41, 43-49 under 35 U.S.C. § 102(e);
2. Whether Vleet and Belfiore render claims 9-10, 15, 36-37, and 42 obvious under 35 U.S.C. § 103(a);
3. Whether Vleet and Hrabik render claims 23-25 and 50-52 obvious under 35 U.S.C. § 103(a); and
4. Whether Vleet, Hrabik, and Maxham render claim 26-27 and 53-54 obvious under 35 U.S.C. § 103(a).

## **VII. ARGUMENT**

### *A. Vleet Fails to Disclose Each and Every Limitation of Claims 1, 3-8, 11, 13, 14, 16-22, 28, 30-35, 38, 40-41, 43-49*

Under 35 U.S.C. § 102, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *See Verdegaa Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987); 35 U.S.C. § 102; MPEP § 2131. Vleet fails to disclose each and every limitation of the claimed invention.

Independent claims 1, 28, and 55 each recite, in part, “creating a second level related event object *comprising the related event object and a set of one or more other related event objects*” and “associating *the second level related event object*, the related event object, and the one or more other related events objects.” Second level event objects associate related events objects, which in turn associate events. (Specification paragraphs 0037, 0006) Thus, for example, if the article is a web site, the claimed invention beneficially provides the ability to identify an additional level of event relationships, such as not only identifying the relationship of events associated with a single web page, but additionally identifying the relationship of events occurring across each web page of a web site. (Specification paragraph 0040). This extra information allows more efficient and precise retrieval and analysis of event information.

In contrast, Vleet, which focuses on storing individual events and allowing later querying of those individual events, fails to disclose tracking event relationships via second level event objects. Paragraphs 0043 to 0050, for example, disclose that Vleet stores Subject, Value, Tag, and Time information for each event. Note that each of these types of information is specific to the particular event, and thus a Vleet event object does not comprise other event objects.

The Examiner nonetheless argues, based on paragraph 0027 of Vleet, that Vleet discloses the claimed second level related event object. Cited paragraph 0027, sentence 1, discloses that event data captured by the Vleet event history server reflects actions performed by users during browsing of a particular web site or set of web sites hosted by the web site system. However, this portion merely states that the *scope* of event capture is usually limited to those events arising from user interactions with the website or set of websites being monitored by the Vleet event capture system, as opposed, for example, to

“external” web sites as noted in sentences 2 and 3. This paragraph reveals nothing about how event objects are used to represent event relationships. Thus, Vleet does not disclose “creating a second level related event object comprising the related event object and a set of one or more other related event objects,” but rather merely states the source of the events that are captured, with no disclosure of how event objects are used to relate them together. Since Vleet fails to disclose such a second level related event object, it necessarily follows that Vleet also cannot disclose “associating *the second level related event object*, the related event object, and the one or more other related events objects.”

Further, Vleet paragraph 0028, as noted in response to the Office Action of December 14th, 2006, merely shows retrieving event objects for the last 50 queries or the last 50 browse nodes, but fails to disclose second level related event objects associating related event objects, which in turn associate related events.

For the foregoing reasons, Vleet fails to disclose or suggest all the limitations of independent claims 1, 28 and 55 of the present application, and thus these claims are patentable over Vleet under 35 U.S.C. § 102(e). Dependent claims 2-8, 11-14, 16-22, 29-35, 38-41, and 43-49 of the present application are also patentable for at least the same reasons. Accordingly, reversal of the Examiner’s § 102(e) rejections of claims 1, 3-8, 11, 13, 14, 16-22, 28, 30-35, 38, 40-41, 43-49 of the present application is respectfully requested.

*B. Claims 9-10, 15, 36-37, and 42 are Patentable over Vleet and Belfiore*

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must suggest or teach *all* the limitations of the claimed invention. *See In re Royka*,

490 F.2d 981 (C.C.P.A. 1974); 35 U.S.C. § 103(a); MPEP §§ 706.02(j), 2143.03. If even a single claim limitation is not taught or suggested by the prior art, then that claim cannot be obvious over the prior art. *See In re Glass*, 472 F.2d 1388, 1392 (C.C.P.A. 1973).

As discussed above, Vleet fails to disclose each and every limitation of independent claims 1, 28, and 55. Particularly, for example, Vleet fails to disclose “creating a second level related event object comprising the related event object and a set of one or more other related event objects.” Belfiore similarly fails to do so. Belfiore involves a federation of interacting servers, where the meaning of the communicated data is implied by a data schema. Paragraph 0142, cited by the Examiner, discloses an event composition service that allows receiving related events, but this is merely a form of filtering or querying and fails to disclose related event objects, much less second level related event objects. Similarly, paragraphs 0146-0147 merely mention an events component capable of distributed eventing, and paragraph 0267 merely states that a notification can be delivered from an event object. None of these paragraphs disclose the second level related event objects of the claims as amended.

For the foregoing reasons, Vleet and Belfiore, whether considered separately or in combination, fail to disclose or suggest all the limitations of independent claims 1, 28, and 55 of the present application, and thus, independent claims 1, 28, and 55 are patentable over Vleet and Belfiore under 35 U.S.C. § 103(a). Dependent claims 9-10, 15, 36-37, and 42 of the present application are also patentable for at least the same reasons. Accordingly, reversal of the Examiner’s § 103(a) rejections of claims 9-10, 15, 36-37, and 42 of the present application is respectfully requested.

*C. Claims 23-25 and 50-52 are Patentable over Vleet and Hrabik*

As discussed above, Vleet fails to disclose each and every limitation of independent claims 1, 28, and 55. Particularly, Vleet fails to disclose “creating a second level related event object comprising the related event object and a set of one or more other related event objects.” Hrabik similarly fails to do so. Hrabik involves verifying the integrity of devices on a network. Hrabik paragraph 0056, cited as allegedly showing computing an event fingerprint, states that events may be consolidated. However, this is again merely a form of event filtering, and fails to disclose the second level event object of the claims as amended.

For the foregoing reasons, Vleet and Hrabik, whether considered separately or in combination, fail to disclose or suggest all the limitations of independent claims 1, 28, and 55 of the present application, and thus, independent claims 1, 28, and 55 are patentable over Vleet and Hrabik under 35 U.S.C. § 103(a). Dependent claims 23-25 and 50-52 of the present application are also patentable for at least the same reasons. Accordingly, reversal of the Examiner’s § 103(a) rejections of claims 23-25 and 50-52 of the present application is respectfully requested.

*D. Claims 26-27 and 53-54 are Patentable over Vleet, Hrabik, and Maxham*

As discussed above, Vleet and Hrabik fail to disclose each and every limitation of independent claims 1, 28, and 55. Particularly, they fail to disclose “creating a second level related event object comprising the related event object and a set of one or more other related event objects.” Maxham similarly fails to do so. Maxham involves a document management system that employs clustering. Maxham paragraph 0036, cited as allegedly showing comparing document fingerprints, discloses the elimination of duplicate documents but states nothing about events, much less second level event objects.

For the foregoing reasons, Vleet, Hrabik, and Maxham, whether considered separately or in combination, fail to disclose or suggest all the limitations of independent claims 1, 28, and 55 of the present application, and thus, independent claims 1, 28, and 55 are patentable over Vleet, Hrabik, and Maxham under 35 U.S.C. § 103(a). Dependent claims 26-27 and 53-54 of the present application are also patentable for at least the same reasons. Accordingly, reversal of the Examiner's § 103(a) rejections of claims 26-27 and 53-54 of the present application is respectfully requested.

*E. Conclusion*

The arguments presented herein demonstrate that claims 1, 3-11, 13-28, 30-38, and 40-55 of the present application are patentable over the prior art of record. Therefore, Appellants respectfully request that the Board reverse the Examiner's rejections of these claims.

Respectfully Submitted,  
Stephen R. Lawrence and Omar H. Khan

Date: November 26, 2007

By: /Christopher King/

Christopher P. King, Reg. No. 60,985  
FENWICK & WEST LLP  
801 California Street  
Mountain View, CA 94041  
Phone: (650) 335-7633  
Facsimile: (650) 938-5200

## VIII. CLAIMS APPENDIX

The claims involved in the present appeal are as follows:

1. A method, comprising:
  - capturing an event associated with an article, wherein the event comprises event data;
  - indexing the event, the indexing comprising extracting at least some of the event data;
  - creating a related event object related to the event and based on at least a portion of the extracted event data, wherein the related event object is associated with a set of one or more related events;
  - creating a second level related event object comprising the related event object and a set of one or more other related event objects;
  - associating the second level related event object, the related event object, and the one or more other related events objects; and
  - storing at least a portion of the extracted event data, the related event object, and the second level related event object.
3. The method of claim 1, wherein the related event object is stored at a first location within a data store.
4. The method of claim 3, wherein at least a portion of the event data is stored at a second location within the data store.

5. The method of claim 1, wherein the event is captured in real-time and indexing the event occurs close in time to capturing the event.
6. The method of claim 1, wherein the event is a historical event and indexing the event is delayed in time after occurrence of the event.
7. The method of claim 1, wherein the article is associated with a client application and the related event object comprises a list of different events associated with the article.
8. The method of claim 1, wherein the article comprises a web page and the related event object comprises a list of events comprising accesses to a URL for the web page.
9. The method of claim 1, wherein the article comprises an email message and the related event object comprises a list of events comprising email messages in an email thread.
10. The method of claim 1, wherein the article comprises an instant messenger message and the related event object comprises a list of events comprising instant messenger messages in a conversation.
11. The method of claim 1, wherein the article comprises a word processing document and the related event object comprises a list of events comprising at least some of load, save and print events associated with the word processing file.



13. The method of claim 1, wherein the article is associated with a client application and the related event object comprises a list of different events associated with the article, and the second level related event object comprises a list of other related event objects comprising articles associated with the client application associated with a specific directory.

14. The method of claim 1, wherein the article comprises a web page and the related event object comprises accesses to a URL for the web page associated with a website, and the second level related event object comprises a list of other related events objects comprising accesses to URLs associated with the website.

15. The method of claim 1, wherein the article comprises an instant messenger message and the related event object comprises a list of events comprising instant messenger messages in a conversation, and the second level related events object comprises a list of other related event objects comprising instant message conversations associated with a particular user.

16. The method of claim 3, wherein the first location within the data store comprises a database.

17. The method of claim 4, wherein the second location within the data store comprises a repository.

18. The method of claim 1, further comprising, after creating the related event object:  
capturing at least one second event associated with the article;

indexing the second event;  
determining that the second event relates to the related event object;  
creating a pointer between the second event and related event object; and  
updating the related event object to record the second event.

19. The method of claim 18, wherein the at least one second event comprises a plurality of second events, the method further comprising:

serially repeating the steps of capturing, indexing, determining, creating and updating for each additional second event.

20. The method of claim 1, further comprising

receiving a search query;

retrieving events relevant to the search query;

retrieving related event objects having related event object data for the relevant events;

and

ranking the relevant events based at least in part on the event data and the related event object data.

21. The method of claim 1, further comprising

receiving a search query;

retrieving events relevant to the search query;

retrieving related event objects having related event object data for the relevant events;

and

outputting the relevant events based at least in part on the event data and the related event object data.

22. The method of claim 1, further comprising receiving updated event data for the event and associating the updated event data with the event.

23. The method of claim 1, wherein a fingerprint of the event data is computed.

24. The method of claim 23, wherein the fingerprint is computed by analyzing text associated with the event.

25. The method of claim 23, wherein the fingerprint is computed by analyzing a location and time associated with the event.

26. The method of claim 23, wherein the fingerprint is used to determine if the event is a duplicate event that has already been indexed.

27. The method of claim 26, wherein the event is not indexed if the event is determined to be a duplicate event and access statistics associated with the related event object are updated.

28. A computer-readable storage medium containing program code, comprising:  
program code for capturing an event associated with an article, wherein the event comprises event data;

program code for indexing the event, the indexing comprising extracting at least some of the event data;

program code for creating a related event object related to the event and based on at least a portion of the extracted event data, wherein the related event object is associated with a set of one or more related events;

program code for creating a second level related event object comprising the related event object and a set of one or more other related event objects;

program code for associating the second level related event object, the related event object, and the one or more other related events objects; and

program code for storing at least a portion of the extracted event data, the related event object, and the second level related event object.

30. The computer-readable medium of claim 28, wherein the related event object is stored at a first location within a data store.

31. The computer-readable medium of claim 30, wherein at least a portion of the event data is stored at a second location within the data store.

32. The computer-readable medium of claim 28, wherein the event is captured in real-time and indexing the event occurs close in time to capturing the event.

33. The computer-readable medium of claim 28, wherein the event is a historical event and indexing the event is delayed in time after occurrence of the event.

34. The computer-readable medium of claim 28, wherein the article is associated with a client application and the related event object comprises a list of different events associated with the article.

35. The computer-readable medium of claim 28, wherein the article comprises a web page and the related event object comprises a list of events comprising accesses to a URL for the web page.

36. The computer-readable medium of claim 28, wherein the article comprises an email message and the related event object comprises a list of events comprising email messages in an email thread.

37. The computer-readable medium of claim 28, wherein the article comprises an instant messenger message and the related event object comprises a list of events comprising instant messenger messages in a conversation.

38. The computer-readable medium of claim 28, wherein the article comprises a word processing document and the related event object comprises a list of events comprising at least some of load, save and print events associated with the word processing file.

40. The computer-readable medium of claim 28, wherein the article is associated with a client application and the related event object comprises a list of different events associated with

the article, and the second level related event object comprises a list of other related event objects comprising articles associated with the client application associated with a specific directory.

41. The computer-readable medium of claim 28, wherein the article comprises a web page and the related event object comprises accesses to a URL for the web page associated with a website, and the second level related event object comprises a list of other related events objects comprising accesses to URLs associated with the website.

42. The computer-readable medium of claim 28, wherein the article comprises an instant messenger message and the related event object comprises a list of events comprising instant messenger messages in a conversation, and the second level related events object comprises a list of other related event objects comprising instant message conversations associated with a particular user.

43. The computer-readable medium of claim 30, wherein the first location within the data store comprises a database.

44. The computer-readable medium of claim 31, wherein the second location within the data store comprises a repository.

45. The computer-readable medium of claim 28, further comprising, after creating the related event object:

program code for capturing at least one second event associated with the article;  
program code for indexing the second event;  
program code for determining that the second event relates to the related event object;  
program code for creating a pointer between the second event and related event object;  
and  
program code for updating the related event object to record the second event.

46. The computer-readable medium of claim 45, wherein the at least one second event comprises a plurality of second events, further comprising:

program code for serially repeating the steps of capturing, indexing, determining, creating and updating for each additional second event.

47. The computer-readable medium of claim 28, further comprising

program code for receiving a search query;  
program code for retrieving events relevant to the search query;  
program code for retrieving related event objects having related event object data for the relevant events; and

program code for ranking the relevant events based at least in part on the event data and the related event object data.

48. The computer-readable medium of claim 28, further comprising

program code for receiving a search query;  
program code for retrieving events relevant to the search query;

program code for retrieving related event objects having related event object data for the relevant events; and

program code for outputting the relevant events based at least in part on the event data and the related event object data.

49. The computer-readable medium of claim 28, further comprising program code for receiving updated event data for the event and associating the updated event data with the event.

50. The computer-readable medium of claim 28, wherein a fingerprint of the event data is computed.

51. The computer-readable medium of claim 50, wherein the fingerprint is computed by analyzing text associated with the event.

52. The computer-readable medium of claim 50, wherein the fingerprint is computed by analyzing a location and time associated with the event.

53. The computer-readable medium of claim 50, wherein the fingerprint is used to determine if the event is a duplicate event that has already been indexed.

54. The computer-readable medium of claim 53, wherein the event is not indexed if the event is determined to be a duplicate event and access statistics associated with the related event object are updated.



55. A method, comprising:

capturing an event associated with an article, wherein the event comprises event data;  
indexing the event, the indexing comprising extracting at least some of the event data;  
creating a related event object related to the event and based on at least a portion of the  
extracted event data, wherein the related event object comprises a set of one or more related  
events;

providing a pointer between the related event object and the one or more related events;  
creating a second level related events object comprising the related event object and a set  
of one or more other related event objects; and

providing a pointer between the second level related event object and the one or more  
other related events objects; and

storing the related event object, at least a portion of the extracted event data, and the  
second level related events object.

**IX. EVIDENCE APPENDIX**

No evidence of the types described in 37 CFR § 41.37(c)(1)(ix) has been submitted during prosecution of the present application.

**X. RELATED PROCEEDINGS APPENDIX**

As indicated in Section II, to the best knowledge of Appellant and the Appellant's legal representative, there are no decisions rendered by a court or the Board that may directly affect, be affected by, or have a bearing on the decision of the Board in the present appeal.